



US 20100045705A1

(19) **United States**(12) **Patent Application Publication**  
**Vertegaal et al.**(10) **Pub. No.: US 2010/0045705 A1**(43) **Pub. Date: Feb. 25, 2010**(54) **INTERACTION TECHNIQUES FOR  
FLEXIBLE DISPLAYS****Publication Classification**(76) Inventors: **Roel Vertegaal**, Battersea (CA);  
**Justin Lee**, Kingston (CA); **Yves**  
**Béhar**, San Francisco, CA (US);  
**Pichaya Puttorngul**, New York,  
NY (US)(51) **Int. Cl.**  
**G09G 5/00** (2006.01)  
**G09G 3/30** (2006.01)  
**G06F 3/041** (2006.01)  
**G06Q 30/00** (2006.01)  
**G06Q 50/00** (2006.01)  
**G06Q 10/00** (2006.01)  
**G06Q 20/00** (2006.01)  
(52) **U.S. Cl. .... 345/661; 345/76; 345/173; 345/156;**  
**705/14.12; 705/5; 705/15**Correspondence Address:  
**MINTZ LEVIN COHN FERRIS GLOVSKY &  
POPEO**  
**ONE FINANCIAL CENTER**  
**BOSTON, MA 02111 (US)**(57) **ABSTRACT**

The invention relates to a set of interaction techniques for obtaining input to a computer system based on methods and apparatus for detecting properties of the shape, location and orientation of flexible display surfaces, as determined through manual or gestural interactions of a user with said display surfaces. Such input may be used to alter graphical content and functionality displayed on said surfaces or some other display or computing system. The invention also relates to interactive food or beverage container with associated computing apparatus inside its body, and a curved multitouch display on its surface, associated interaction techniques for curved multitouch displays, methods of use, and apparatus for refilling said electronic food or beverage container.

(21) Appl. No.: **12/459,973**(22) Filed: **Jul. 10, 2009****Related U.S. Application Data**(63) Continuation-in-part of application No. 11/731,447,  
filed on Mar. 30, 2007.(60) Provisional application No. 60/788,405, filed on Mar.  
30, 2006.